

Asian Disaster Management **News**

Bhutan's summit:

Interview with Mr. Namgay Wangchuk, Director General of Disaster Management explains how his mountainous country overcame mainstreaming obstacles

Making Housing in Pakistan Safer:

Article 25's experiences from the field

Why mainstreaming makes sense:

AusAID shares their ideas on why mainstreaming is one of their priority areas



Safer Development Planning

Editor's Note

Dear Readers,

It is my pleasure to present to you this year's first edition of *Asian Disaster Management News*, Asian Disaster Preparedness Center's quarterly newsletter.

By showcasing the voices from around our region, our newsletter will present interviews, interest stories and case studies on work in disaster risk management from around our region.

As ADPC prepares for the upcoming Regional Consultative Committee (RCC) on Disaster Risk Reduction from March 25-27 in Ulaanbaatar, Mongolia, this issue focuses specifically on safer development planning topics in Asia-Pacific. Since 2005, the RCC has been implementing its Mainstreaming Disaster Risk Deduction Program throughout the region. Today, the Program works hand-in-hand with governments in Asia-Pacific through Priority Implementation Partnerships to integrate Disaster Risk Reduction (DRR) into the development planning process.

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Mainstreaming [...] is not an end in itself, but rather a strategic approach.

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You will find that one theme authors' consistently address throughout this edition is that mainstreaming is not a 'one-off' exercise, but rather a continuous process that extends through long-term planning. It is not an end in itself, but rather a strategic approach. Our Priority Implementation Partnerships work towards 'institutionalizing' the mainstreaming process across all sectors to ensure sustainable development in the long-run.

We hope that you enjoy this edition on 'safer development planning' and that you keep informed on upcoming news related to the RCC meeting in March.

Sincerely,

N.M.S.I Arambepola
Editor-in-Chief



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About us

Asian Disaster Management News is published by the Asian Disaster Preparedness Center, to serve as a channel of communication and source of information for disaster risk management practitioners and development workers in Asia-Pacific.

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Published quarterly, *Asian Disaster Management News* accepts submissions related to disaster risk reduction in Asia-Pacific.

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Myanmar:

1st national training on mainstreaming DRR and Climate Risk Management into Development Planning conducted for planning officers from line ministries

New module developed on integrating disaster and climate risk into planning training of ministries

Support provided to Ministry of National Planning and Economic Development in DRR and climate issues for 20-year national comprehensive development plan

Thaninthayi region plans to include DRR and Climate issues in 'Regional Development Planning' - APDC support to be provided

Philippines:

Technical support on application on DRR/CCA inclusive EIA Guideline in pilot projects in partnership with Environment Management Bureau and NDRRMC

Nepal:

Capacity building support and recommendation on DRM/CRM inclusion to 6 ministries and 3 pilot districts

Vietnam:

5-day learning course on Mainstreaming Disaster and Climate Risk Management in Development Planning processes developed

Why mainstreaming makes sense

AusAID shares their ideas on why mainstreaming is one of their priority areas

by Disaster Prevention and Risk Reduction Section, AusAID

In a recent interview with ADPC, AusAID shared their perspectives on why mainstreaming is a smart investment.

ADPC: In short, why invest in mainstreaming disaster risk reduction in Asia?

AusAID: *Australia sees mainstreaming as a key aspect of reducing vulnerability, building resilience and protecting development gains. By supporting the mainstreaming of DRR policies and practices, we are able to more effectively support communities' resilience to disasters, thereby saving lives, protecting livelihoods and sustaining development outcomes.*

AusAID's partnership with ADPC and, in particular, our support for the RCCDM is an essential aspect of our approach to mainstreaming DRR. RCCDM's focus on engaging decision makers and planners across the region is a vital aspect of ensuring cross-sectoral engagement and active collaboration between communities, key policy makers and governments. It is central for effective DRR mainstreaming.

ADPC: What are some of the challenges you've encountered and your lessons learned?

AusAID: *Mainstreaming DRR into local planning processes is often difficult because there is insufficient understanding of the range of hazards that affect a community, while effective engagement between communities and local planning authorities can often be difficult.*

Through AusAID's support to ADPC, some of these challenges have been overcome. ADPC's strength is understanding member country contexts and supporting the integration and capacity building of disaster risk reduction into the development process.

ADPC: In your opinion, why is the Regional Consultative Committee on Disaster Management (RCC) significant to the Asia region?

AusAID: *The RCC brings together key players in the region from national governments to donors and multilateral organisations in Asia. The strength of the RCC is that partners can share experiences and strengthen networks. With renewed ADPC leadership, it is important for key partners to engage and communicate and embrace the direction that ADPC is taking for the future. It is important that RCC maintains a real connection between policy makers and the needs of communities across the Asia-Pacific region and facilitates the sharing of learning between Member States.*

ADPC: What would AusAID like to learn from the 10th Regional Consultative Committee on Disaster Management this year?

AusAID: *Through the RCC, AusAID is interested in understanding the roles of partners, their challenges, achievements and find better ways to engage with ADPC. Improved programming and coordination will result in people in Asia being less vulnerable to disasters.*

Protecting Development Gains

Nepal is progressing steadily in the field of Disaster Risk Management

by Adam Yousri, ADPC

As the 10th Meeting of the Regional Consultative Committee for Disaster Management and the 4th Global Platform for Disaster Risk Reduction approach, Nepal is tackling challenges in order to effectively cope with disaster risks and climate change.

Mr. Reshmi Raj Pandey, Joint Secretary, Ministry of Federal Affairs and local Development, is one official at the helm of Nepal's Disaster Risk Management effort.

"Nepal is a very vulnerable country to natural hazards," begins Mr. Pandey, "most concerning is the rate of glacial melting on our mountains; our glaciers are melting at a faster rate than that of the North and South pole areas."

Nepal's unique geography can be segmented into three distinct regions, the Southernmost Terai Region, the Hill Region and the Northern Mountain Region. The Mountain Region in Nepal consists largely of the Himalayan Mountain Range, location of the world's tallest peak, Mt. Everest. The Himalayan Mountain Range encompasses approximately 15,000 glaciers. Glacial melt is a risk that can cause unsustainable water supplies and flooding in the long-term.

Furthermore, the sharp altitude disparity in Nepal's three topographical regions causes great climatic variation. Its many natural hazards include floods, drought and earthquakes. Over 160,000 people are affected by natural hazards in Nepal each year.

In order to tackle these vulnerabilities Nepal must mainstream disaster risk reduction and climate change adaptation strategies into development.

Nepal – taking action

Nepal's Central Natural Calamity Relief Committee is steadily working towards improving Disaster Risk Management. The committee currently coordinates its efforts in accordance with Nepal's National Disaster Risk Strategy 2009.

The committee is also mainstreaming disaster risk reduction into the planning processes of local level authorities.

"We have developed a Local Disaster Management Planning Guideline," states Mr. Pandey, "We are encouraging [local authorities] to analyze the existing disaster risk reduction situation and prepare their own respective disaster management plans in accordance with the issued Disaster Management Planning Guideline."

According to Mr. Pandey, guidelines such as this one are essential in creating harmony and consistency between government agencies and its development partners.

The Committee is also working in coordination with the Ministry of Science, Technology and Environment to institute community based Local Level Adaptation Plans of Action (LAPA). LAPA is Nepal's predominant program in climate change adaptation. The objective of the program is to enable communities to understand the uncertain future of climatic conditions, implement flexible plans for responding to changing climatic conditions, and catalyze integrated approaches between various sectoral programs.

The Future of Disaster Risk Management in Nepal

Nepal is progressing steadily in the field of Disaster Risk Management; however, there is much work to be done in anticipation of the post-HFA era. Political instability continues to delay the implementation of the National Disaster Management Act (NDMA). LAPA also remains far from full completion.

"There are 75 Districts and 3,915 Village Development Committees (VDC) [in Nepal]" states Mr. Pandey, "Out of all these, we have implemented LAPA in only 70 VDC."

In the coming years professionals such as Mr. Pandey who are dedicated to Disaster Risk Management in Nepal have will be vital for their success.

Getting communities involved

Malaysia offers insight on the benefits of bottom-up approaches to DRR

By YBhg. Datuk Mohamed Thajudeen bin Abdul Wahab
National Security Council of Malaysia
Prime Minister's Department

Experiences have shown that community based approaches offer viable solutions for managing and reducing risks and ensuring sustainable development. The key role which communities play in disaster management and DRR is strongly acknowledged by the UNISDR and an increasingly predominant view is that for risk reduction strategies to be truly effective in protecting lives and livelihoods, they need to be people centred. They need to build on people's local knowledge and cultural practices, and apply tools and approaches that people can easily understand and integrate into their lives.

Conversely, DRR using top-down government and institutional interventions alone are often considered insufficient as they tend to have a lesser understanding of community dynamics, perceptions and needs, and ignore the potential of local knowledge and capacities.

On many occasions, the local people and organizations are the main actors in DRR and response. When disaster strikes, immediate response (i.e. search and rescue, and care for those injured) is often carried out by family members, friends, and neighbours as well as grass-root organizations. Many members of local communities also represent the greatest potential source of knowledge of hazardous conditions, and are the repositories of traditional coping mechanism suited to their individual environment. Their awareness of historical risk scenarios is often stronger than that of other people.

Malaysia acknowledges the fact that in building the resilience of nations and communities to disaster, it cannot be done without the active participation of NGOs. Their involvement in DRR are useful for a number of reasons:

- NGOs can operate at grass-root level with communities and local organizations as partners, and take a participatory approach to development planning. This allows them to respond better to local people's priorities and build on local capacities.
- NGOs enjoy a higher operational flexibility as they are relatively free from bureaucratic structures and systems, and better able to respond and adapt quickly and easily; and
- NGOs often work with and on behalf of the neediest group – the poorest, and the most vulnerable.

As such, the Government of Malaysia, through the NSC, has set out to increase its engagement with NGOs. This effort began during the last monsoon season and further bolstered with the revision of the National Security Council Directive No. 20, which is the main guideline for disaster management in Malaysia. While the earlier focus was on the response element, the revised directive now embraces the 4 cycles of disaster management. The private sector and NGOs roles are also spelled out in the directive and they now play a bigger part in helping the government to manage disasters.



Training Calendar 2013

Schedule	Training Course	Venue	Course Fee (USD)
Feb 18-Mar 1, 2013	11 th Inter-regional Course on Public Health Emergency Management in Asia and the Pacific (PHEMAP-11)	Bangkok, Thailand	
Jun 10-14, 2013	4 th Regional Training Course on Mainstreaming Disaster Risk Reduction into National Development Process (MDRD-4)	Bangkok, Thailand	
Jun 24-Jul 5, 2013	22 nd Regional Learning Workshop on Community-Based Disaster Risk Reduction (CBDRR-22)	Bangkok, Thailand	3,175 (W/ Acc.) 2,275 (W/O Acc.)
Aug 19-23, 2013	10 th International Course on Hospital Emergency Preparedness and Response (HEPP-10)	Bangkok, Thailand	
Aug 19-28, 2013	5 th International Training Course on Climate Risk Management in a Changing Environment (CRM-5)	Bangkok, Thailand	2,825 (W/ Acc.) 2,075 (W/O Acc.)
Sep 2-13, 2013	9 th International Training Course on GIS for Disaster Risk Management (GIS4DRM-9)	Bangkok, Thailand	3,175 (W/ Acc.) 2,275 (W/O Acc.)
Sep 16-28, 2013	11 th International Course on Public Health in Complex Emergencies (PHCE-11)	Bangkok, Thailand	
Oct 7-18, 2013	12 th International Training Course on Flood Disaster Risk Management (FDRM-12)	Bangkok, Thailand	3,175 (W/ Acc.) 2,275 (W/O Acc.)
Oct 7-18, 2013	3 rd Regional Course on Nutrition in Emergencies (NIE-3)	Bangkok, Thailand	
Nov 4-22, 2013	43 rd Regional Training Course on Disaster Management (DMC-43)	Bangkok, Thailand	4,150 (W/ Acc.) 2,775 (W/O Acc.)

For more information, please visit www.adpc.net



Bhutan's summit

Interview with Mr. Namgay Wangchuk, Director General of Disaster Management explains how the mountainous country overcame mainstreaming obstacles

By Brianna Hunt Ficcadenti
Asian Disaster Preparedness Center



ADPC is currently providing technical support to the Royal Government of Bhutan under the second phase of a Priority Implementation Partnership (PIP) between the Department for Disaster Management and the Gross National Happiness Commission on mainstreaming disaster risk reduction into National and Local Development Planning. ADPC recently had a chance to sit down with Mr. Namgay Wangchuk, the Director General of the Department of Disaster Management in Bhutan, to discuss the challenges to mainstreaming and how Bhutan is overcoming them.

Introduction: Disaster Risk Reduction in Bhutan

"The concept of disaster risk reduction is fairly new in Bhutan", Wangchuk explained from his desk in the Department for Disaster Management (DDM) office in the hills of the Motithang area of Thimphu. Established in 2005 as a small division of the Department of Local Governance under the Ministry of Home & Cultural Affairs, DDM upgraded to a full fledged Department in 2008, due to increased mandates and responsibilities assigned to the agency regarding the management and reduction of disaster risks in Bhutan.



"Prior to 2005, Bhutan did not have any kind of system in place for disaster risk management."

Wangchuk continued, "After a series of floods, Glacial Lake outburst floods, storms and wildfires throughout the 1990s, we have increasingly felt the need to have a proactive, pre-planned disaster risk reduction approach, rather than merely an ad-hoc reactive approach. In order to do this, we have been working hard to establish various disaster management Institutions at all levels, introduce systems and procedures, tackle disaster management Issues, create awareness and build up capacity in the country."

DDM is mandated to act as the national coordinating agency for all disaster risk reduction and disaster management in the country, and as such has been coordinating the efforts to integrate DRR into development processes such as plans and policy formulation. "We need to co-ordinate very closely with relevant sectors to recognize and address the various factors of risk within development as DRM is multi-disciplinary," he continued.

Raising awareness and building technical capacity identified as top priorities

"Our first challenge was creating awareness among other government officials about the importance of mainstreaming DRR. The concept of mainstreaming itself is fairly a new

“
I think the PIP in a nutshell is doing exactly that – helping to overcome the obstacles
”



concept." Wangchuk explained how policy makers in all relevant sectors first needed to understand the logic and the potential benefits of integrating risk reduction initiatives into their plans, policies, programs and projects."

"The second challenge," he continued, "is the lack of sector specific technical capacity."

"Of course, some of the main Government Agencies, like Health and Education have been already doing it in their own work, but it needs to be further institutionalized and better coordinated. It should be clearly spelled in their policies and plans. For that we need to work closely with the sectors, and introduce some important tools of

Ulaanbaatar on the Horizon:

Regional Consultative Committee on Disaster Management Meeting in Mongolia this month

Established in 2000, as one of the first regional dialogue platforms to promote consultation and cooperation on reducing disaster risks, the Regional Consultative Committee (RCC) for Disaster Management

promotes peer advocacy and exchange of experiences in disaster risk management (DRM). Its Secretariat, the Asian Disaster Preparedness Center (ADPC) initiated the Committee to bring countries in the Asia-Pacific together to achieve their common goals in disaster risk management, explore ways to transform policies into practice, and promote regional cooperation.

Themed 'Integrated Planning and Action for Sustainable Development,

Disaster Risk Reduction and Climate Change Adaptation at the Local Level', the meeting is co-hosted by the Government of Mongolia through its National Emergency Management Agency (NEMA). The meeting will seek to provide a platform for practical discussions on how to implement actions for DRR, CCA and Sustainable Development at the local level, through an integrated planning approach. With a view to address these issues in the context of both accelerating the implementation of the HFA over the

next 2 years, and looking forward to the post-2015 DRR framework and development agenda, the following two sub-themes have been identified for focused discussions at the RCC 10 meeting:

Sub-theme 1: Accelerating the implementation of the HFA through the implementation of priority actions for local level DRR and CCA over the next 2 years

Sub-theme 2: Actions for the

Post-2015 – Taking the consultation process forward and integrating DRR into the Post-2015 Development Agenda

Through addressing these two sub-themes the meeting will also correspond with the 4th Global Platform to be held in May 2013, which seeks to reduce risks and reinforce resilience in communities through durable and sustainable efforts by stakeholders. Today, the RCC boasts 32 members

from 26 countries across the Asia-Pacific. Members include the Heads of National Disaster Management Offices as well as observers from UN Agencies, donors and ADPC partners. Since the RCC's inception in 2000, the Australian Government through AusAID has generously provided support funding. To-date, nine RCC meetings have been held. For more information on the RCC and their work on mainstreaming visit, <http://www.rccdm.net>.



teristic of Bhutan 11th Five Year Plan (2013-2018).

“We are genuinely satisfied that the PIP had brought this understanding and Change.”

Next Steps: A focus on the local level and Climate Change Adaptation

Satisfied with the progress made in the recent years, Wangchuk went on to describe future plans. “Working with Local Governments and other local agencies, such as the Dratshang Lhentshog (Monastic Bodies), business communities, civil society organizations etc., is our next move,” he explained. “Due to limited resources, we have yet to fully involve them in taking the DRR to the next level. That’s why we intend to focus on them, as far as possible, in the second phase of the PIP.”

During 2013, DDM will undertake a second phase of the PIP in which DDM will be working very closely with stakeholders to integrate DRR into Local development planning processes. “Even if it is a little too late for inclusion in the 11th Five Year Plan, we can still build up their capacity to mainstream DRR into annual activity prioritization and budgeting activities as well a set the foundation for further DRR integration into the 12th five year plan.”

“We would also like to focus on integrating DRR initiatives into Climate Change Adaptation (CCA) activities. There are currently a lot of CCA strategies being formulated in the country. Integrating DRR into CCA will be very compatible and complementary and we need to come up with various strategies, identify priority areas and funding arrangements to fulfill those activities in a meaningful way, which benefits the society at large.” And, off course, DDM will divert all its time and efforts to bringing these benefits down to the Local Community level who are the ultimate sole benefactors.

“These are some of the problems and challenges in Bhutan in trying to meaningfully mainstream DRR initiatives into sector specific plans, policies, programs and projects.”

Fortunately, the National Disaster Management Act was enacted by the Parliament in its 10th Session on the 27th of February 2013. “With this Act in place, I truly believe that henceforth, it will be smoother sailing as far as legislative and institutional back up is concerned. This legal foundation will support enhancing the various disaster awareness, education, risk reduction, preparedness, response and reconstruction activities undertaken by all the stakeholders and relevant agencies in a well-planned and coordinated fashion.”

mainstreaming DRR, to answer the questions: *How do we actually go about it? Where do we start?*”

As a result of a large effort by DDM over the last few years to sensitize and create awareness, various stakeholders now have an increased understanding and appreciation for mainstreaming DRR.

Overcoming initial challenges through a Priority Implementation Partnership (PIP)

Namgay Wangchuk described how the Priority Implementation Partnership (PIP) for mainstreaming DRR into national and local development planning, through the Regional Consultative Committee’s Program on Mainstreaming Disaster Risk Reduction into Development, kick-started a shift in attitude towards integrating DRR into the development process.

“I think that in a nutshell the first phase of the PIP has done exactly that – help overcome the obstacles. It was a small project, but we needed it to pave the way.”

In the first stage of the PIP, which began in early 2011, DDM partnered with the Gross National Happiness Commission (GNHC), the National Agency responsible for guiding development planning processes. With technical support from ADPC, the partnership accomplished various outputs, including a sensitization workshop for high-level government officials and decision makers in order to raise awareness at the highest levels, a skill-development training for planners and the institutionalization of DRR integration into the development, through a number of development planning tools and guidelines.

“With the help of experts from ADPC, we managed to convince the GNHC that mainstreaming DRR is little different from mainstreaming gender or poverty. Disasters have the potential to destroy all the development gains that we have painstakingly achieved during the last 40-50 years in Bhutan, as well as deter us from achieving future goals. GNHC has thus realized the need to mainstream DRR and gives its support to reduce disaster risks through development planning.”

In 2012, GNHC included DRR concerns in the Protocol for Policy Formulation and the Guideline for Preparation of the 11th Five Year Plan, where it has been identified as one of the National Key Result Areas.” The result of the latter is that disaster resilience will be featured as a salient charac-



Country Spotlight

Mainstreaming put to the test

One official’s experience in Bhutan
by Asian Disaster Preparedness Center

As a Planning Officer in Bhutan’s Ministry of Agriculture and Forestry (MoAF) Mr. Sangay Chopel, understands that Disaster Risk Management is essential for the overall wellbeing of the Bhutanese people.

Influenced by an ADPC training course on Mainstreaming Disaster Risk Management, Mr. Chopel has taken it upon himself to devise a Mainstreaming strategy for the MoAF to propose in Bhutan’s 11th Five Year Plan.

“In Bhutan natural hazards can be devastating. Storms, flash floods, landslides and earthquakes can destroy a farmer’s entire crop yield. Many people here rely on agriculture for their livelihood. If you take away their crop, you are taking away their means to survive,” he explained to ADPC in a recent interview.

Bhutan - The Land of the Thunder Dragon

Upward of 40% of the population rely on agriculture and forestry for their livelihoods, food security and economies. For people in Bhutan, subsistence agriculture is a way of life.

Agriculture depends heavily on the climate of a particular region. Each agricultural product in Bhutan, whether it is rice, corn, root crops or citrus, has its own climatic requirements. Abnormal deviations from these requirements have adverse effects on yield.

Bhutan is known as the ‘Land of the Thunder Dragon’ for the violent storms that blow in from the Himalayas. Here, climate change and weather hazards have always been point of vulnerability. Besides Himalayan storms, glacial melting can also cause flash floods. Frequent landslides during the rainy season and seismic activity further increase risks for farmers.



Disaster Risk Management - critical for farmers

Accurate and timely information on natural hazards is critical for farmers in making important decisions to maximize their crop, particularly, in setting up protective mechanisms and scheduling inputs and activities.

The successful development of Bhutan's agricultural economy is, therefore highly dependent on the use of climatic and seismic information, particularly on weather hazards.

"Bhutan has made a significant effort to modernize and sustain agriculture for national food security," Chopel notes, "however, without the ability to proactively assess the dynamic of seismic and weather manifestations, we cannot hope for this progress to bring about the expected returns."

Tackling cross-sector natural hazards – Mainstreaming an option

Since 2009, Chopel has worked as Bhutan's Department of Disaster Management (DDM) focal person for the MoAF. He recognizes the need for Mainstreaming Disaster Risk Management in MoAF most of all.

"We work in a very ad-hoc manner," states Mr. Chopel referring to the, at times, tedious nature of his work as a DDM focal person, "Whenever there is a disaster, there is coordination for response and relief. [...] we receive a disaster assessment from the DDM; we make our own assessment from the Department's; we compile and submit the assessment to the DDM; and only then do we present the assessment to the national level in terms of total damages, quantity of seeds and needs of communities."

"There is a lot of frustration," he added, "when we cannot deliver quickly it can be stressful because lives and livelihoods are in danger. With mainstreaming, our system could be more effective and efficient from the beginning."

When funding has to be approved at the national level on a case-by-case basis, quick response times are an issue. More importantly, such reactionary funding leaves little room for investing in Disaster Risk Management, which aims to mitigate

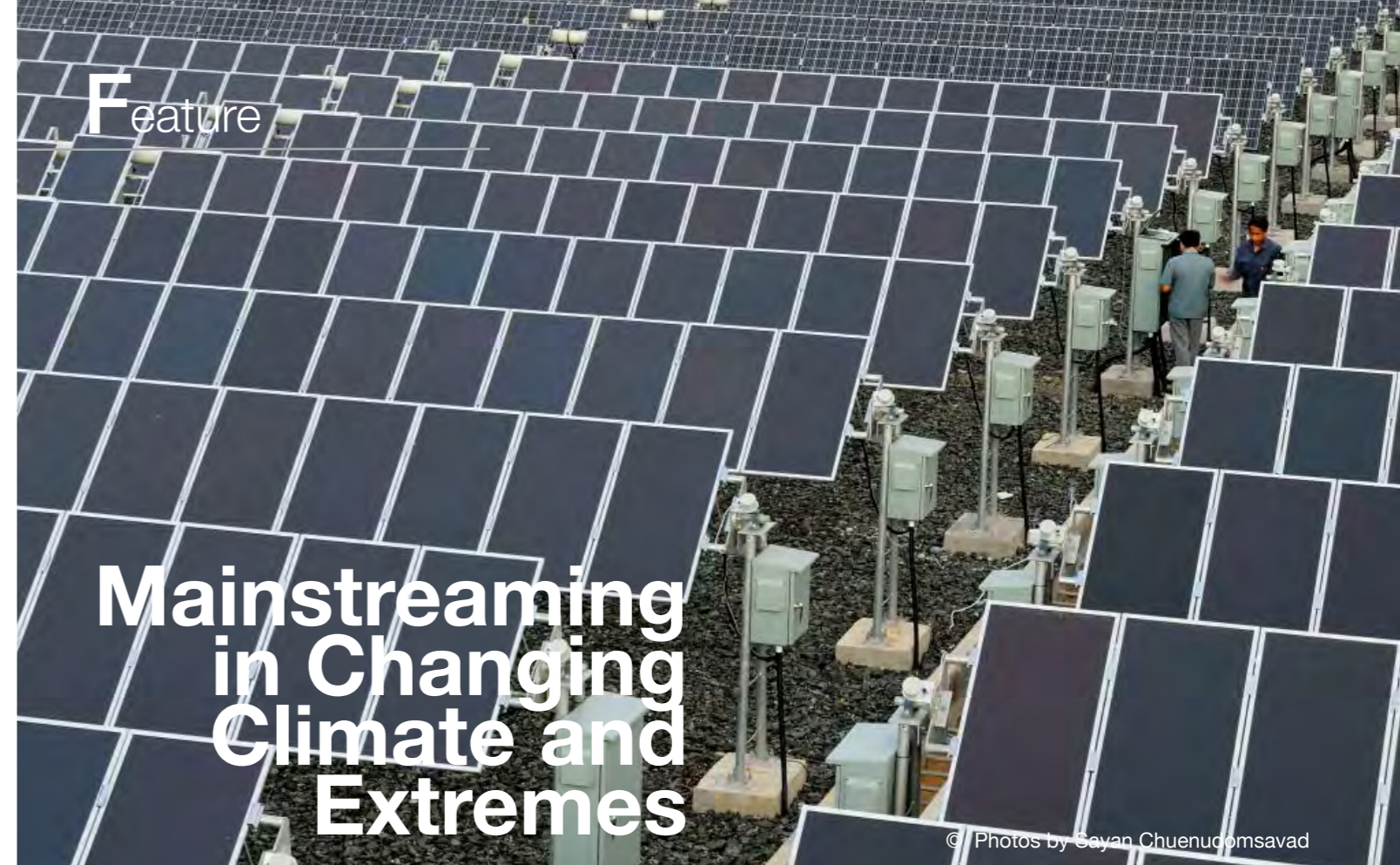


the effects of a disaster before they happen rather than deal with the consequences of a disaster after the fact. However, there is a reason why things are the way they are.

"One problem we face is that when disaster strikes, the government asks us to divert budget from regularly planned activities to reconstruction," explains Chopel in regards to funding for Disaster Risk Management.

"I am anxious to see the mainstreaming strategy put into action," Chopel adds enthusiastically, "the Bhutanese people stand to gain a lot if it is effective, particularly in food security. Hopefully MoAF can be a role model for the other ministries in this regard."

“
In Bhutan natural hazards can be devastating. Storms, flash floods, landslides and earthquakes can destroy a farmer's entire crop yield. Many people here rely on agriculture for their livelihood. If you take away their crop, you are taking away their means to survive.
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Mainstreaming in Changing Climate and Extremes

© Photos by Sayan Chuenudomsavd

Emerging Pathways to Integrate Risk Foresight and Climate Services into Development Processes

**by Atiq Kainan Ahmed
Climate Information Application Specialist, ADPC**

Mainstreaming – an 'integrating' pathway

The term 'mainstreaming' among disaster risk management practitioners is being gradually interpreted as the 'integration' of disaster risk reduction and climate change adaptation considerations into the development process and related activities. Meaningful mainstreaming requires involvement of a broad range of stakeholders to integrate disaster and climate change considerations into relevant social, economic and environmental policies and strategic multi-scalar actions. In this respect, mainstreaming for resilience requires well-thought-out process integrating scientific understanding of changing climate and the extremes that are now shaping our futures. This, calls for better understanding of the anticipated risks of future, changing climate and its anticipated impacts over all spheres of our national development.

Mainstreaming of climate risk information and climate services into developmental planning and decision making is still in early stages in most of the countries in the Asia-Pacific Region. Integrating climate risk information in adaptation and risk management measures in sectoral and institutional level is important to safeguard existing and future developments in the light of climate variability, the projected increase in extreme weather events, changing

development landscape and future investment decision making. Avoiding 'mal-adaptation' or 'skewed development' in coming days are significant matters of 'foresight' of the anticipated futures. A critical element of reducing disaster impacts in the future is the application of science and evidence to assess disaster risk, in order to anticipate and prepare for future hazards (Foresight, 2012).

We are experiencing the grown number of damaging cyclones (e.g. cyclone Nargis, Sidr, Bhopa, Ketsana) devastating floods (e.g. Pakistan in 2010/2011, Thailand in 2011, China in 2012) or severe droughts (e.g. Sri Lanka in 2012) which have given unprecedented sufferings to the people and economies of the region. Understanding the climatic risks with less uncertainty and the impacts of these changes on the hydro-meteorological systems and extremes remained as critical issues to factor in for all sectors. Coupling of climate risk information vis-a-vis climate services with the overall development through overall disaster risk reduction mainstreaming would enable better preparedness towards extremes and avoiding major development dilemmas for future. Better planning is needed now integrating this emerging area of mainstreaming climate risk information and climate services into the sectoral developments as well as into the national development. This is now critical than ever. This layer of mainstreaming is an essence of time and an emerging pathway to make integration to the development policies and process. In this article, the newly developing Global Framework on Climate Services (GFCS) is discussed as a newly emerging process and shown as an emerging pathway to mainstream risk foresight into development. Risk foresight measures include climate risk information, climate services, early warning information, futuristic risk assessments and many more.

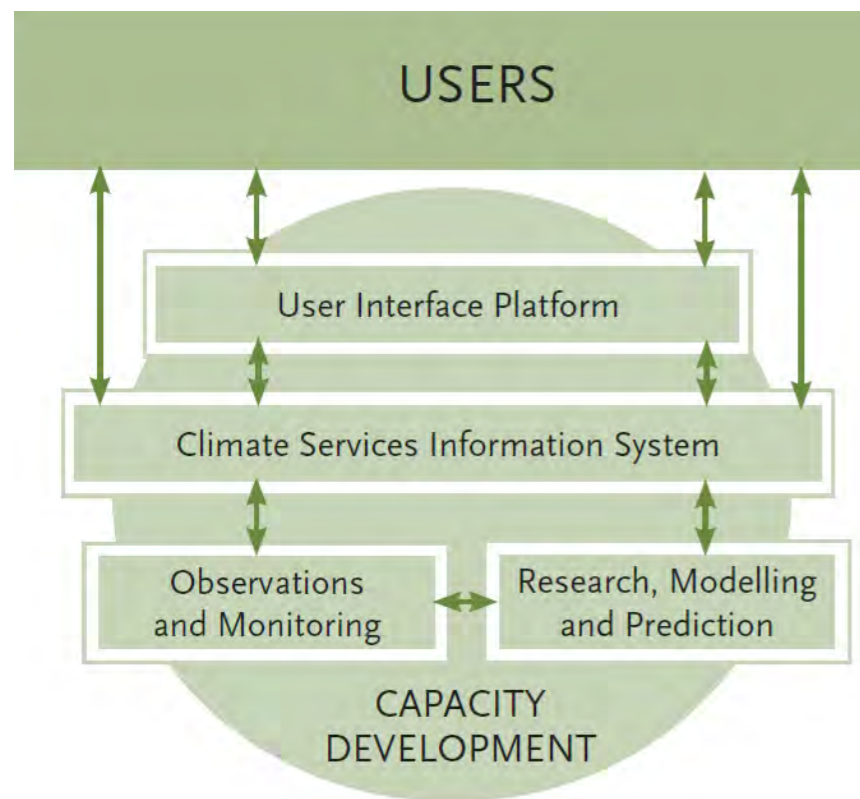


Figure: Key elements of GFCS (WMO: 2011).

Integration of climate risk foresight into development: Global Framework on Climate Services as an emerging pathway

The GFCS is an emerging framework and provides a useful roadmap towards integration of climate risk information into the development process. The main goal of the GFCS is to “enable better management of the risks of climate variability and change and adaptation to climate change, through the development and incorporation of science-based climate information and prediction into planning, policy and practice on the global, regional and national scale (WMO, 2011). The GFCS is endorsed by the World Climate Conference-3 in 2009 and now shaping up as a new mechanisms to meet the challenges of forecasting of climate extremes and future risks. It is based on five key components: a) User Interface Platform; b) Climate Services Information System; c) Observations and Monitoring; d) Research, Modeling and Prediction; and e) Capacity building. Focus on the integration of these five components the GFCS will enhance the mainstreaming of climate risk information in the key priority sectors such as disaster risk reduction, agriculture and food security, health, water and so forth. Mainstreaming of the GFCS into the overall development planning process would enable integration of climate risk information which would help the sectors and institutions better prepared and more resilient towards the future changes and climatic extremes.

This GFCS identifies that living with, and adapting to, climate variability and change is an everyday challenge. These are often manifested through the disasters we face. What has changed is the measure of trust we can have in the basic assumption that past climatic and socio-economic conditions are indicative of current and future conditions. The combined effects of climate change, population growth, migration, infrastructural development and inappropriate land use present unprecedented challenges to society; populations are exposed to hazardous conditions and in positions of increasing vulnerability. Despite this, countries must be able to anticipate the future climate with some reasonable degree of confidence in order to adapt successfully. Effective forecasts and climate services would, for example, facilitate climate-smart decisions that would reduce the impacts of climate-related disasters, improve food security and health, and enhance management of water

resources. These objectives are similar to any DRR mainstreaming and call for reducing risks in an integrated manner.

Where is the entry point?

Identification of appropriate entry points for integrating climate risk information and climate services into developmental planning is not always rosy, this requires considerable interactions between the information producer and information users as well as commitment to do so. It often takes time, resource and partnership to do so. Entry point may vary from sector to sector as well as type of information available or needed at the point of integration. The more immediate use of the short-range climate forecast information for example the 1-3 days of weather and climate information could be easily integrate-able in the form of severe weather forecasting thereby integrated into the immediate disaster preparedness measures including saving lives.

On the other hand, the seasonal range (1-3 months and more) forecast or the long-range forecast could be gradually incorporated in the agricultural planning or in the considerations of sectoral climate change adaptation by integrating that into a host of long term planning measures such as land use or land suitability planning, water management planning, redesigning structural standards, Environmental Impact Assessments and so forth.

These sets of measures require systematic understanding of the climate risk information, specific impacts, spatial-temporal risk identifications, mappings and many more where climate services information systems (e.g. data portals), user-forums (e.g. seasonal forums) or research often needed. However, both ‘immediate short-range severe weather’ and the ‘seasonal/long range’ information could be taken as entry point. Integration of climate risk information and climate services into the development process is a ‘no regret’ option hence useful for any user. Climate risk information and climate services do not have a single entry point rather have multiple entry points subject to given context and setting.

Continued awareness, dialogue and capacity building are essential for mainstreaming

National level DRR and CCA professionals are now trying to incorporate the future risk information into their respective sectors to reduce future risk and better develop the decision making process. This is a good time to build on these encouraging developments through meaningful modes of integration and mainstreaming. There are still many barriers in mainstreaming futuristic risk information and climate services both at the levels of organization and/or at the national enabling environment.

Barriers include constraints specific to changing climate, development progress and predictability, including the availability of scientific information, lack of communication between the science and policy communities, absence of knowledge base on successful measures, low capacity for forecasting and predictability as well as financial resources. Significant area of action lies in improving the capacity, resource allocations and creating an enabling policy environment. Dialogue between scientific and policy makers could enhance understanding of climate risks and measures available to mitigate them, which would facilitate the mainstreaming of disaster and climate consideration in the relevant budgetary planning and implementation process. Another area for mainstreaming climate adaptation is improved climate data collection as a part of establishing early warning systems at community level.

Conclusions

The mainstreaming of DRR and CCA in changing climate calls for a dynamic approach. This calls for doing things beyond the traditional mode of operandi of mainstreaming and takes into a new move of integrating science, institutions and applications in a unique manner. Here the integration of forward looking measures and trying out things involving multiple communities from science, sectors and policy makers are essential steps. In recent decades, due to the manifestation of various climatic hazards and extremes, development practitioners are convinced that they need to work together beyond their domains and



make hand in hand efforts to mainstream the risk foresight measures. The newly developed GFCS is a potential framework that enables DRR practitioners to work together with the scientific professionals. It allows bridging the divide between science and sectoral professionals through incorporation of science, information sharing, useful services creation and giving room to the stakeholder creating user-interface based dialogue. It allows demonstrative concerted applications on the ground. It is now moving ahead with the global and inter-governmental commitments and will be much more open to the national and sub-national incorporation in near future.

Development processes now can make use of the GFCS as an emerging interface. This would ultimately create better options for decision making in building resilience in changing climate when the need for risk foresight is greater than ever. The harmonious mainstreaming of climate risk information and climate services with the development processes would create more opportunities to reduce risk and safe lives and livelihoods in coming days. Policy makers can take more informed decisions; including climate risk information in their structural-nonstructural and area planning incorporating future trends and patterns into account. They can protect their investments and existing resource/assets through better understanding of the risks through National to Local level Action planning in a more climate-smart manner (Mitchell et al., 2010).

While the future holds numerous uncertainties, the integration of the climatic risk foresight and GFCS at national and local levels would allow ‘win-win’ integration for managing the future better but starting from now.

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Making Housing in Pakistan Safer

Article 25's experiences from the field

By Robin Cross
Architect, Director of Projects & CEO Article 25



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“ Mainstreaming can be achieved where decisions to adapt the program are taken as soon as possible after the most appropriate materials or methods have been identified.

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On October 8th 2005, an earthquake measuring 7.6 on the Richter Scale resulted in extensive damage and loss of life throughout Khyber Pakhtunkwa and the Pakistan-administered Kashmir. The eventual death toll in this area has been estimated at between 70,000 and 80,000 with a similar number injured. Additionally, upwards of 3 million people were rendered homeless; their houses, often poorly constructed and sited on or near hazardous slopes were vulnerable not only to ground shaking but also the risk of landslides triggered by the tremor. Across both regions the physical toll measured approximately 600,000 homes destroyed, 6,000 schools and colleges destroyed and 500 health facilities destroyed.

Article 25 was engaged by Muslim Aid to provide technical support and construction management to rebuilding efforts driven by

home-owners and local communities. Article 25's role involved the inclusion of seismic mitigation within construction and the mainstreaming of this practice both within organizations and across communities working in the housing sector. Mainstreaming Disaster Risk Reduction (DRR) in this sector remains critical to sustainable development; poorly constructed housing impacts negatively across economic, social and cultural spheres, particularly limiting the ability of poorer communities to resist natural disasters and tying up scarce resources in avoidable repairs and reconstruction.

Article 25 identified a vernacular construction approach that used local building practice and offered greater earthquake resistance. A Dhajji Dewari house can be thought of as a patchwork of timber and stone. Resistance to an earthquake is achieved by:

- Many small frame components distributing the energy of an earthquake evenly across the wall.
- The earthquake's energy is dissipated in the friction of the timbers moving against stone infill.

DRR measures critical to the housing sector can be broadly categorized as choice of site and materials, site preparation and building structure. Detailed measures were designed to be incorporated into the construction of Dhajji houses to further reduce the impact of natural disaster. The mainstreaming of these measures required considered use of materials and the surrounding environment, effective demonstration and integration of technical practice, and engagement.

Materials and surroundings

Awareness of local context underpins mainstreaming of DRR. Where possible, teams must plan from the outset for use of the most effective materials. Mainstreaming can be achieved where decisions to adapt the program are taken as soon as possible after the most appropriate materials or methods have been identified. A key means of achieving this is through engagement with concerned groups, and introducing technology in training which builds capacity of local partners, two measures also independently relevant to the success of mainstreaming.

Technical practice

During research and early site visits the Article 25 project team identified a need for improved construction and drew upon models developed by UN Habitat, adapting them for the local context of the particular communities.

Any introduction of DRR measures must be accompanied by appropriate training and capacity building. The knowledge acquired by those involved in construction makes them less likely to produce work of a poor standard and more likely to reject work that does not meet correct standards. Article 25 found that the creation on site of exemplar joints, structures and buildings proved to be the most effective means of mainstreaming DRR into the housing sector.

Something to be avoided is a diminution in standards over time, either due to a dearth of qualified personnel on the ground, or resource costs. It is necessary to have strong links between the project team and contractors or site manager in-country who can translate standards into continued good practice.

Training included full explanation of the basis for new measures and took local considerations into account. In order that mainstreaming of DRR is achieved, beneficiaries must be able to perceive the effectiveness and sustainability of buildings and this can be undermined by problems caused by poor workmanship.

Engagement

Mainstreaming requires engagement with groups both affected by the disaster and leading reconstruction. This can range from government to members within a community whose voice may not be otherwise heard. Article 25 worked with its local partner organization, Muslim Aid, the Government of the Islamic Republic of Pakistan (the Earthquake Reconstruction and Rehabilitation

Authority (ERRA), UN agencies and local communities.

Article 25's extensive community participation work in its projects gives preference to beneficiaries selected through community consultation on the basis of vulnerability. In Pakistan, widows with children under 18 years old, those unable to work as a result of a disability, those unable to work as a result of age and the poorest were identified by the community. By passing the ownership of decision making to the affected individuals the engagement with the process and understanding of the importance of including DRR in projects can be improved.

A dialogue with government is critical. Typically responsible for national rebuilding programs, it is through the government that long term best practice can be established and maintained, not least because in most cases this party will have the resources to finance large scale projects, or be the conduit for international funds. Viewing such actors as partners where possible is an effective strategy. In Pakistan, the ERRA had drawn up a strategy, which was to be implemented by contractors to make each project a learning process. Where this breaks down, mainstreaming DRR is put at risk. Article 25 noted the impracticality of contractors not being listed with the ERRA. In order to have the simplest process whereby good practice on sites is recognized by government, contractors must be properly registered and collaborate with officials. Local partners are often the most important facilitators.

Local partner organizations are key to ensuring that mainstreaming DRR occurs alongside housing reconstruction. In Pakistan, Muslim Aid acted as a vital channel for information on local considerations, the views of affected communities, and as a facilitator of communication between the government and partners. They were the consistent presence in country to promote adherence to standards and assurance of payment for personnel who had complied with DRR guidance. This is a strong motivation for achieving DRR best practice in construction projects.

Article 25's work in Pakistan was over a long period and learning has been carried forward into other projects.



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About Article 25

Article 25 is the UK's specialist technical NGO providing construction skills to international development. With a team of architects, engineers, and participation practitioners Article 25 provides construction professionals to NGOs, community groups and governments in the developing world.

Article 25 is currently leading programs to mainstream construction best practice and DRR inside large NGOs and government departments in the developing world. Article 25 currently holds a portfolio of work in Afghanistan, Burkina Faso, the Democratic Republic of the Congo, Haiti, India, Pakistan, Sri Lanka, Uganda, and beyond.

NOTE: For more information on Article25 contact info@article-25.org

Best Practice

Article 25 identified four points key to mainstreaming DRR into the housing sector. Early and continuous consultation across groups

- Adapt to local conditions and be ready to redesign DRR where necessary.
- Practical examples of good construction practice act as guidance for replication.
- Training of local builders and partner organizations in DRR measures and construction practice is essential, with reference to government guidance where available.

Notes from Bangladesh

Disaster Risk Reduction Mainstreaming and Internalization in the National and Community Systems

By Md. Shahab Uddin
PhD Candidate, Asian Institute of Technology

High-frequent small disasters are very common in society and most of the time society has its own mechanism to cope up with them. Nevertheless, when it is a question of severe disasters or when the event/hazard is very rare and society has no past exposure and experience (for example, average life expectancy in Bangladesh is 69 years and average reoccurrence period of a magnitude 6 earthquake is around 1002 years), it is very difficult for them to cope up with such adverse situations. By adopting appropriate knowledge sharing and preparedness mechanisms, integrating disaster risk reduction measures in existing rules and regulation and developing new ones if necessary, creating a win-win situation for implementation of those rules and regulations can help to reduce disasters vulnerability by increasing resiliency of the community.

Bangladesh – a country vulnerable to numerous natural hazards

Bangladesh has its own history of major disasters such as, the 1970 cyclone and subsequent flood where over 300,000 people perished, the 1991 major cyclone killed over 120,000, and the 2004 floods which inundated over 34% of the country resulting in 747 deaths (MoFDM and CDMP). Bangladesh and the north-eastern Indian states are seismically very active and earthquake risks are increasingly seen as a major problem. From 1869-1930, five earthquakes with magnitude $M \geq 7$ affected parts of Bangladesh, two out of which had epicenters inside the country.

Bangladesh is one of the most densely populated areas of the world, and will continue to face destructive earthquake hazards in the future. The predicted scenario calls for immediate actions by the Government, NGOs, Social Organizations and Community Organizations to prevent disaster impacts. It is also important to evaluate the current institutional settings, plans and policies at national and local level, needs and gaps to develop a most effective management mechanism using minimum efforts and resources. Mainstreaming risk reduction efforts within government, NGOs and private sector is viewed as key to achieve a sustainable solution for all types of hazards in risk reduction interventions across the whole country.



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In Bangladesh[...]it is common for people to take a loan to build a house. If we can use this dependency in a positive way to encourage individuals to adhere to the existing rules and regulations related to DRR, it may be possible to make housing more resilient against disasters.

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Building codes – getting the private sector involved

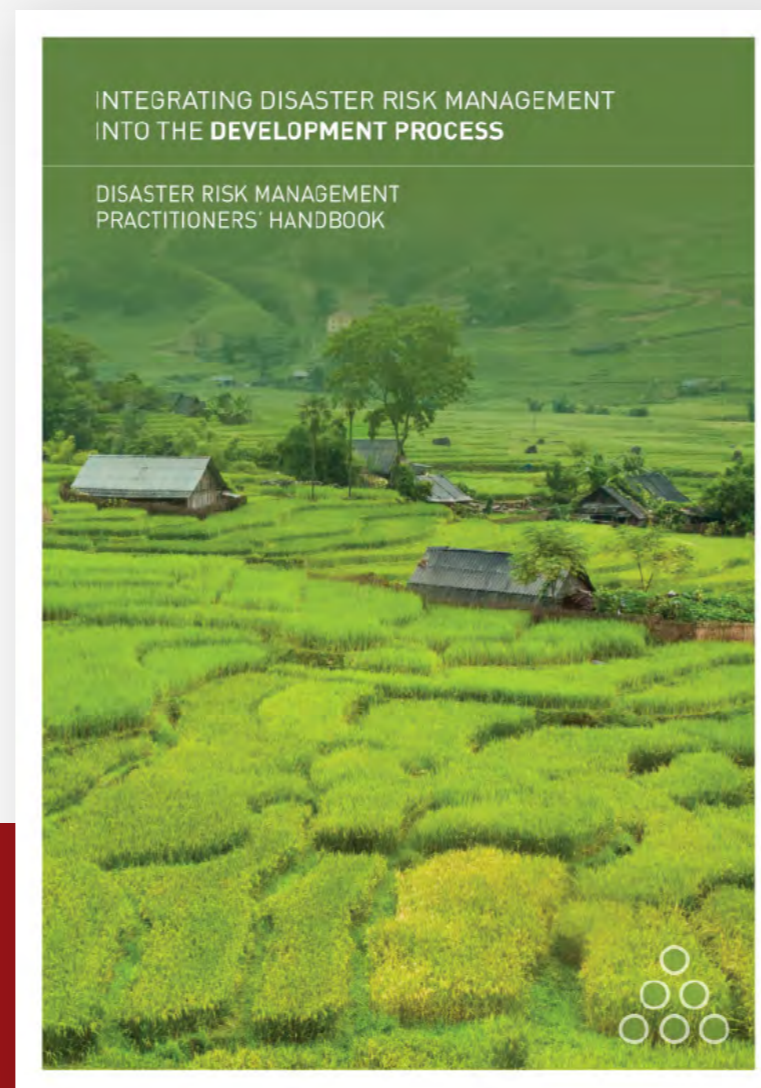
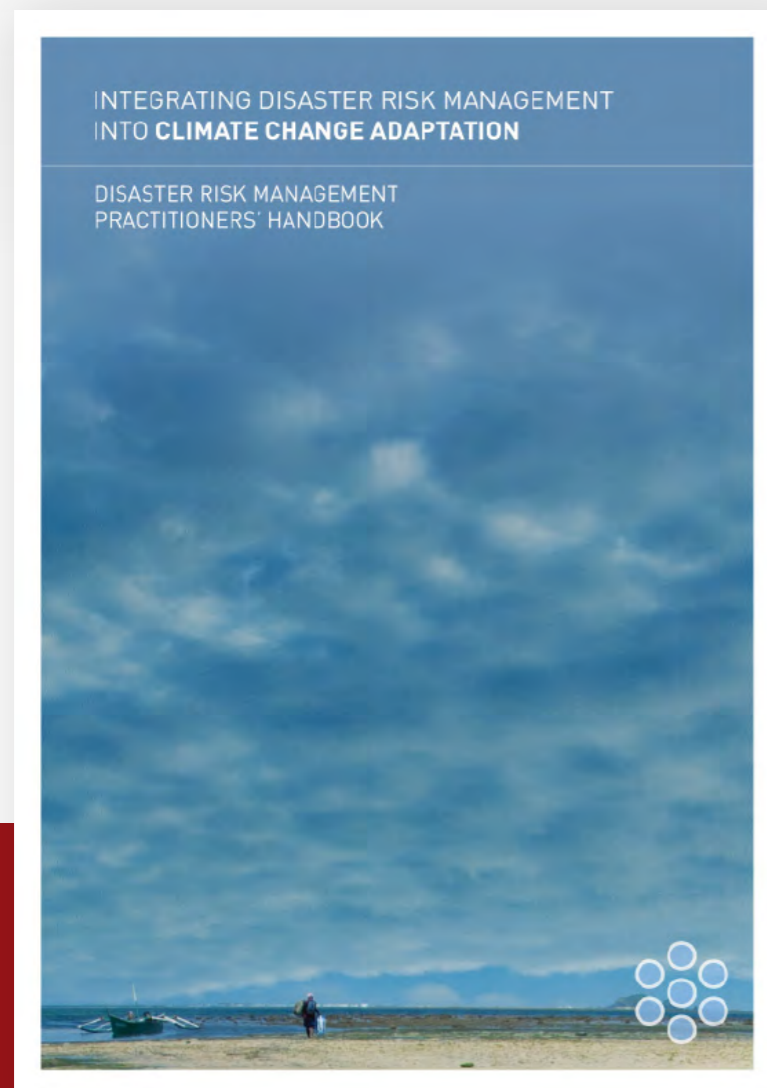
Bangladesh is very prone to earthquake hazard. Building codes, which are considered as the most effective tools to safeguard the lives and property against major disasters are sometimes neglected by building owners. If it is possible to transfer the responsibility to the private sector from the government, disaster risk reduction in the housing sector may work more efficiently.

In Bangladesh, especially in the urban municipalities, it is common for people to take a loan to build a house. If we can utilize this fact in a positive way, communities may be encouraged to adhere to the existing rules and regulations related to DRR. As a result home owners may make their houses more resilient against disasters.

Nowadays, disaster insurance plays important roles in disaster risk transfer and sustainable development. If government develops a regulation where everyone should ensure disaster insurance in disaster prone areas while applying for house loan, it will make them follow building codes appropriately because the insurance company will monitor the construction quality every time for their own interest. The owner will have to follow the appropriate design for getting the next installment of the insurance released. This single policy can create new job market for many people, develop a culture to follow government rules and regulations, increase disaster resiliency of the community without any investment and strengthen capacity of exiting government institutions.

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